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THE GENESEE FARMER.

SATURDAY, MARCH 5, 1836.

The Road Laws.

A distinguished citizen of New England, now on his travels in Europe, says in reference to some part of Switzerland, "The way is rather hilly—mountainous somewhat, but *the road, like all the roads, was* EXCELLENT. A century to come, will bring us up with this continent in the making of roads." The writer evidently means to say that we are far in the rear on this point, though he has been most familiar with the roads in the longest settled parts of the United States.

From Patterson's account of the Island of Arran (in the last number of the Edinburgh Quarterly Journal of Agriculture,) we take the following paragraphs, which we offer as subjects for reflection:

"Previous to 1817, there may be said to have been *no* MADE ROADS *in Arran*, excepting the Parliamentary one. In some places indeed, attempts had been made *to improve the tracks*, but with little effect. By the laws of Scotland, every man is bound to perform *six days' work* on the public roads yearly; but in most of the counties, Acts of Parliament *have been* OBTAINED for converting the labor into *an equivalent in money*. Here however, the people are yearly called upon to make or repair what are called the statute-labor roads; and as this is a public servitude not at all liked, *the labor was negligently performed*. When the overseers called out the people in their districts, instead of able-bodied men coming forward, there were generally only *women, girls*, and *boys!*

"Shortly after 1817 however, it was judged advisable to appoint *a* SKILLFUL overseer on the roads of the Duke of Hamilton's property in the island. The people are now taken out *in manageable numbers;* and in one quarter or another are upon the roads nearly all the year, except seed time and harvest. *None but efficient persons are accepted as laborers*, and absentees make a money payment.—Since this plan has been adopted, *great improvements* have been made in the old roads, and many entirely new lines made."

We are not advocates for increasing our road taxes, unless applied to better advantage than they are at present; but on the contrary, *we are satisfied that the roads might be kept in far better condition at one half the expense.* We have been doing worse than sweeping the dust against the wind. Except A NEW SYSTEM can be adopted for the permanent improvement of our roads—unless something can be effectually done to lessen the amount of mortar which we have to manufacture in the course of the year—our plan would be to do nothing more than to keep bridges and culverts in good repair; to remove the old logs from "the cross-ways," and to fill up the hollows and all sloughs or mud-holes with gravel or finely broken stone; to keep off the water which flows on the adjoining lands, and to turn off all that collects in the time of heavy rains; to throw the loose stones as often as once a month from the beaten track; and to fill the ruts by means of a scraper prepared for the purpose, as soon as the mud becomes encrusted or dry enough to be worked by such an instrument. It frequently happens after a wet time, more especially in the spring, that the *hubs** are almost as bad to travel over as they are when frozen. Such a scraper would smooth and level the inequality of the beaten track; and though it is one of the greatest improvements of modern times, there are hundreds, and probably thousands of road districts in which it has never been used.

If the goodness of our roads however, are not to be dependent on the weather except in a very limited degree, what we have proposed in the preceding paragraph, will be found entirely insufficient; and the question will naturally arise, In what way can we provide for their thorough improvement? It is evident that their present condition cannot be suddenly changed to any great extent; and to render them durably good, must be the progressive work of many years. Yet if a judicious system be adopted, every day's labor will yield a permanent benefit, not only to be enjoyed by the present inhabitants, but which will go down as a legacy to posterity.

To M'Adamize our district roads in the present state of things, would be too expensive to be seriously proposed; and yet it may be allowable to make some remarks on the system, because it is *the most perfect* that has yet been invented for common carriages—the only one indeed which is perfectly good and equally good at all seasons whether wet or dry.

Any kind of soil will serve for the foundation of a M'Adamized road—even bog earth; but then it must be kept *dry*. Ditches must be cut to drain it thoroughly, while the pavement of broken stone, *like a roof*, effectually turns off the the rain. These roads are very slightly *ridged*, descending from the middle towards the sides only 1 inch in 36, so that if the beaten track be 30 feet wide, the difference between the highest and lowest parts, right across, will only be 5 inches. Such a descent allows the water to run off, and more than that would be an evil. On convex roads, carriages take the middle track in order to keep upright; and in consequence it is unequally worn, as we may observe in all our *high-ridged* district roads.

Although the pavement forms an arch, it has no abutments or curb-stones, and depends solely on its own strength, and on the support of the earth below. Finely broken stone, wedged together under the wheels of carriages, "unites itself in a body like a piece of timber." None of the roads about London were more than six inches thick; and one part of a turnpike near Bristol, was left to wear till not more than three inches thick in most places, and in no place more than four inches, yet *no water penetrated it.* As an extreme, M'Adam judged that "ten inches of solid material was equal to carrying any thing."

Round stones never consolidate; and broken stone will not, and wedge together, unless it be made small. *The largest pieces are not allowed to exceed six ounces;* and those who superintend the work, carry a small pair of scales with a six ounce weight. We must therefore infer that most of the pieces are of less weight. The *chunks* of rock that occur along our turnpike, and in every other place in this district where broken stone has been used, exhibit no flattering commentary on the skill of the superintendents.

The advantages of finely-broken stone are three fold: the mass becomes consolidated; it protects the foundation that supports it, from wet; it offers no obstruction to wheels or hoofs, and hence there is no jarring or shaking to loosen the materials that are packed together.

Common roads of this description however, are not to be hoped for until stone can be cheaply broken by machines. Such plants have long engaged the attention of individuals; and we saw a notice not long ago, of a machine at Pittsburgh that had been newly invented for the purpose; but we shall probably have to wait some years before any thing so beneficial in road-making, will be generally introduced.

Let us then turn our attention to other means within our power. Let us remove from our highways all the *dirt* and *trash* that has been accumulated there, and lay bare the gravelly subsoil. We want no ridges to travel along, if suitable drains or ditches be provided at the way-sides. Let us neither scrape in, nor cast in, any thing from which mud can be made; and if we can only complete ten rods in a season, let us persevere.

* This word is a provincialism; but one which we presume will be well understood by a great majority of our readers. To those who may not be familiar with it however, we would say, that HUBS are such parts of a road as have been raised, when muddy, by the hoofs of horses or cattle, and have become hard by drying or freezing.

Dry Feet for Farmers.

There are few articles which have at once come into such general use, or which have been found applicable to so great a variety of practical purposes, as the common India rubber, or gum elastic of the shops. This substance is the production of a small tree, a species of myrtle, growing in abundance in the tropical regions of Africa, Asia, and America; and is already becoming quite an article of traffic in those countries. It is procured by making an incision into the trees, from which a milk-like fluid flows, and is caught in vessels provided for that purpose. When partially dried, it is spread thinly over a ball of clay, and as the gum hardens, successive

layers are added, until the desired thickness is obtained. The clay is now reduced to powder by beating, and the gum remains in the shape of a pear necked bottle, in which form it is most frequently imported. The gum is however now frequently found in other shapes, and its black appearance is owing to its exposure to the smoke in drying. There has hitherto been considerable difficulty in dissolving it, most of the common solvents nsed for the other gums producing little or no effect upon it. Purified naptha, or what in this country is usually termed Seneca oil, has been most frequently and successfully used for this purpose. One of the most valuable uses to which India rubber has been applied, is the rendering of leather, or boots and shoes, impervious to water, and thus securing that important requisite to health, dry feet. Various kinds of rubber paste and blacking have within a few years been offered to the public, all good no doubt, but still at such prices, that common farmers, who surely need a preservative of this kind against the effect of almost continued exposure, were not, to any considerable extent, able to avail themselves of the benefit. My object in this paper is to state for the benefit of my brother farmers, and who have suffered as I have done the consequences of wet feet, the manner in which I prepare this substance for my own use, and which I find to answer every desirable purpose. I take common tallow, say one pound, and melt it in a small iron kettle holding about two quarts; the ordinary skillet would answer the same end. I have ready for use, cut into as fine strips or pieces as may be convenient, from four to six ounces of India rubber, and when the tallow begins to get pretty hot, I put in the gum, and gradually increase the heat, until by stirring I find it has completely dissolved, and incorporated with the tallow. While the process is going on, it will foam violently, and large volumes of pungent smoke will be thrown off; but I have never known it to take fire, or other danger or inconvenience result from the preparation. When thus prepared it is applied with a brush in the same manner as tallow to boots and shoes, and with the best effect. A small quantity of lamp black, combined with the mass when melted, will furnish blacking to the leather, and if any choose, they can add the usual ingredients for making a paste for polishishing. Farmers, however, are generally content, if they can keep their boots and shoes simply blacked and water proof, and this, the proper application of the above cheap and easy preparation, will certainly ensure. That it cannot be injurious to leather, when used in this way, the nature of the substance, and experience would both determine. For India rubber, I have always used old overshoes, of which a supply can in general be readily obtained, always rejecting the most worn, burned, or other defective parts. The spring of the year is the time farmers are most exposed, and I am confident the use of this preparation will prevent many a rheumatic twinge, if it should ward off nothing worse from him who is compelled to be out at all seasons. G.

Seasonable Hints.

As farmers are always much pressed with business on the opening of spring, and indeed throughout all the early part of the season, they should at the present time attend to every thing, which can be done before the busy season commences. Wood should be drawn, cut and corded; rails split and drawn where needed; tools repaired, and corn selected, and many other things attended to which a little thought will point out. But there is another department of the farmer's business, or which at least *ought* always to be such, which may now be attended to with great advantage and propriety—this is, *thinking*– applying knowledge—arranging work. It will be found on examination, to hold as an almost invariable rule, that *good* farmers are *thinking* farmers, and that *bad* farmers are *unthinking*—and that a man's brains deserve quite as large a share of credit for his success, as his hands.

If every farmer will *look ahead*, and plan and arrange all his business beforehand, he will be certain to find it much to his advantage. But it will not do for him to trust to his memory merely, where there is such a multiplicity of operations to be performed. He must have all his business in "black and white" before him. The following method is a good one. Provide a small blank book with a flexible leather cover, which may be conveniently carred in the pocket, and appropriate one page to each work in the season; set down every thing, on its proper page, which is to be done at the time denoted. By having this book constantly in the pocket, many things may be noted down the moment they occur to the mind, which otherwise would be forgotten. Furthur,—provide another book exactly similar, and note down in it briefly, during the progress of the season, whatever work is done at the time, with hints of such improvements as may occur. This will be an excellent memorandum book for the next season.

And what is the advantage of this method? Plainly this:—It enables the farmer to do every thing *in season*—which is a *sine qua non* of good farming. Every thing depends on "laying out and performing certain kinds of labor, in the times and seasons when they ought to be performed." Unless he keeps a little *ahead* of his business, his business will be sure to keep a little ahead of him; unless he takes time by the forelock—unless he drives business, business will be sure to drive him. Every farmer will recollect that it commonly happens that his ploughing, planting, sowing, gathering, and so forth, are done later than he intended. And why? Because there are many unforseen or unthought of pieces of work, which interrupt his main business, distract his attention, and thus cause delay. Now, if he has his whole work set before him on paper, he sees at a glance what is to be done, he knows at once where to direct his attention, and his whole business is under his complete control.

And this is no trifling advantage. Doing things at the proper time is one of the chief secrets of success, in good farmers. Two farmers may have the same quantity, and the same quality of land, and may expend the same amount of labor, and yet the results, the profits, will be widely different. For instance, one commences the culture of a field of corn. It is late, and he is obliged to hurry through with his ploughing, and consequently the grass is not completely turned under. He is then interrupted by other urgent business,and cannot plant under several days, and in the mean time grass is beginning to sprout. As soon as the corn is up it has to encounter the grass, so that at the first hoeing it is small and sickly. This also greatly increases the labor of hoeing, and before the last of the field is finished, the grass in the first hoed part has again become vigorous. Thus through the whole season there is an ineffectual warfare with grass and weeds; and if there is fifteen bushels on the acre, it is certainly not in consequence of the management it has received. Now what farmer has not seen every part of this process in the course of his observations?

But the other farmer adopts a different sort of management. By having his work systematically arranged, he commences in season, and goes through without interruption. He employs a strong team, and ploughs well. The grass is all turned under. Immediately after, the harrow is applied, and this prevents any possibility of the grass afterwards sprouting up between the sods. Thus a large amount of labor is prevented in the outset. Little hoeing is required; the corn has an early start, and the surface of the ground being easily kept clear of weeds, it has the whole occupancy of the soil,the nourishment of which is not divided between corn and weeds. Thus a full and fair crop is the consequence; and we think it requires no great sagacity to tell which farmer has cultivated his ground at least expense.

Bird-tracks in Sandstone.

It may be known to most of our readers that the remains of many animals, unlike any that now exist, are found in earth, but more especially in rocks, their bones and shells constituting a part of the stony strata of the globe. A similar remark will apply to a great number of extinct plants. It is not our design to attempt an explanation of the causes which have produced such extraordinary results, though it is due to truth and sound philosophy to say in passing, that the late discoveries in Geology amply confirm the Mosaic account of the Creation.

We well remember our surprise and pleasure when we first found those "medals of nature" in a rock belonging to one of the ranges of the Allegany Mountains; but we can offer no observations of our own that would prove as interesting as the following extract from Dr. Hildreth's description of the coal strata of the Kanhawa Salines:

"The whole of this slate and shale is filled with the impression of *extinct* species of plants. Every layer of not more than an eighth or the fourth of an inch in thickness when separated, displays fresh impressions of a variety of species, delineated on the face the slate with the most exquisite beauty and perfection. The minute markings of the ribs and nervures are faithfully preserved. The vegetable matter is replaced by a thin coating of coal, and when this is removed, the perfect impression is left on the slate. The peeling up or separating of the folia of the shale,seemed to me like opening the leaves of a sealed book, here deposited by the Creator from the earliest ages; containing a faithful and true record of the history of vegetation in its primitive days. Before me was collected a vast library of natural history, containing the stereotype copies of an almost endless variety of tree

and plants, whose families and species, as we have every reason to believe, lived and died before the creation of man."

We believe it is no longer doubted that coal is of vegetable origin. In many places among carboniferous strata, are found the remains of large trees,—some standing in their natural position with their roots embedded in what was once soil, though now covered up at great depths in solid rock,—while others lie prostrate, evincing that they were torn up by the roots, and then deposited like drift wood. All these, with hundreds of herbaceous species of the same period, are now extinct. It also appears from the nature of both the plants and animals which inhabited the earth in that "DAY," that the temperature of the tropics, extended within the polar circles.

Professor Agassiz of Switzerland is engaged in publishing a great work on Fossil Fishes, which is to be embellished with two hundred and fifty plates in folio. He has already examined more than ten thousand specimens; and one year ago, had ascertained eight hundred extinct species. No doubt many others will be found; and our own country may yet furnish its quota. We remember taking the impression of a fish about four inches in length from the slate* rock of this district, a few years ago; but it soon crumbled into pieces. Harder beds of the same rock, however, frequently occur. From the chalk near Lewes in England, some specimens of great beauty have been taken, and one with its "mouth open and entire. The air bladder appears unbroken in many of the specimens, and proves that the bodies were completely incased in the chalk before the putrefactive process had commenced. In some of these fishes, the fins, gills, and teeth, are preserved, as well as the air-bladder and tongue; the scales are also very distinct."

Of those who have been concernced in such researches, no one has been more distinguished for skill and success than Gideon Mantell of Sussex in England. The fossils we have last noticed were collected and preserved in his Museum. To him the scientific world is also indebted for the discovery of the *Iguanodon*, a reptile which Cuvier considered more extraordinary than all those previously known. "I measured the circumference of the condyle or joint of a thigh bone in the museum," says Pakewell, "and found it to be thirty-five inches! and the thigh bone of a larger [specimen] at a distance from the condyle measured twenty-five inches in circumference." "Imagine an animal of the lizard tribe," says Professor Silliman, "three or four times as large as the largest crocodyle, having jaws with teeth equal in size to the incisors of the rhinoceros, and *crested* with horns! Such a creature must have been the Iguanodon." "Marvellous as it may appear," says Mantell, "we cannot but infer that some individuals attained *a height of nine or ten feet*, and were from *sixty to one hundred feet in length!* A circumstance even more extraordinary than its magnitude, is that of its having performed mastication like [an ox], its teeth, which are of a very peculiar form, being in general worn down by the operation of grinding its food."

* Pyritiferous Slate of Eaton.

The "*Day*" in which this animal lived has been called the Age of Reptiles. "There was a period," says Mantell, "when the earth was peopled by *oviparous quadrupeds of a most appalling magnitude;* and that reptiles were *the Lords of the Creation*, before the existence of the human race." This agrees exactly with the 21st verse of the 1st chapter of Genesis, if we substitute *great reptiles* for "great whales," which the Hebrew text requires.* "It is impossible," says Cuvier, "not to acknowledge as a certain truth, the *number*, the *largeness*, and the *variety of the reptiles* which inhabited the seas or the land, at the epoch in which the strata of Jura were deposited."

We shall briefly mention a few of the most remarkable of these creatures, for which we are indebted, as well as for most of the preceding facts, to Silliman's Journal, appearing there mostly in the form of quotations however, from European works.

"The *Ichthyosaurus*, (fish-like lizard) of which *several species* have been discovered, had a large and long head, with jaws armed with teeth like the Crocodyle; enormous eyes; a short neck; a large and long body furnished with four broad and flat paddles, composed of numerous bones, and was evidently destined to live in the sea."

This description is from Mantell. One lately discovered in England "must have been at least *thirty-five feet in length*, and of considerable breadth."

"The *Plesiosaurus* (animal resembling a lizard) is yet more remarkable. The *head is very small*, and armed with numerous pointed teeth; the *neck of an enormous length*, and composed of between thirty and forty vertebræ, being *double* the number of that of any other animal, (the Swan which has the greatest number of cervical vertibræ having but twenty-three); the body like that of the Ichthyosaurus, has four paddles; the tail is short. This extraordinary creature appears to have been but little calculated to make rapid progress through the sea," continues Mantell, "and was still less fitted for progressive motion on the land. It is therefore probable that it swam on or near the surface of the water, *carrying his neck like a swan, and darting on its prey.*"

The *Plerodactylus* had the wings of a bat, and the structure of a reptile, with jaws furnished with sharp teeth, and claws with long hooked nails. We have not seen any notice of its size.

"The *Mososaurus* or fossil animal of Maestricht, attained the size of the crocodyle, appears to have been acquatic like the latter, and to have moved its vast tail from side to side as an oar."

"The *Megalosaurus* (great lizard) must have been nearly *forty five feet in length* and *seven or eight feet in height.* It was probably a terrestrial animal."

These notices are principally intended however, to serve as an introduction to other wonders of the primeval ages. In the last number of Silliman's Journal, there is a long article on *the foot marks of Birds on rocks* by Professor Hitchcock who is so advantageously known for his Geological Survey of Massachusetts. Eight different kinds of tracks have been examined, and engravings exhibit the shape of the feet. These discoveries were principally made last summer.

These foot-marks have been found in *five* places near the banks of the Connecticut river, along a line of thirty miles in extent. The rock in which they occur, is called by Prof. H. "new red sandstone," and it appears to be equivalent to the Saliferous Rocks which abound in the northern parts of this district. It is worthy of remark that none of these tracks have been found where its surface has been exposed for many years to the weather.

* Silliman's Journal, vol. xxv. p. 35–6.

Prof. H. thinks it evident that these footmarks were "made by an animal with *two* feet, and usually *three* toes. In a few instances a *fourth* or hind toe, has made an impression, not directly in the rear, but inclining somewhat inward; and in one instance, the *four* toes all point forward. Sometimes these ternate depressions run into one another, as the toes approach the point of convergence; but they also sometimes stop short of that point, as if the animal had not sunk deep enough to allow the heel to make an impression. Nay at that point the stone is in some cases irregularly raised, as if the weight of the animal had caused the sand or mud, to crowd upwards in the rear of the step. In a few instances also, behind this slight elevation, there is a depression as if a knobbed heel had sunk slightly into the yielding mass."

"The successive layers of the *rock are bent downwards*, under these impressions, often two, three, and even four inches in thickness. These tracks have been traced, and no less than ten have succeeded each other in such a direction, and with intervals so nearly equal, that it is impossible to doubt that they originated from the continuous steps of an animal. The alternate tracks deviate a little to the right, and the others to the left, the toes being ordinarily turned outwards. It is easy to determine whether they were made by the right or left foot of the animal."

Prof. H. is satisfied that these tracks were made on soft mud, (now rock,) at that time under water; and that the birds were of the tribe of Waders, like the crane. He also concludes from decisive evidence, that the mud then lay horizontally, though in one place it now has a dip of 30°. The rock has consequently been sunk or elevated since that period.

Some idea may be formed of the the size of these primeval birds by comparing their footmarks with those made by birds of the present day, and this Prof. H. has carefully done. The foot of the pea-hen is three inches and a half long, and its step is nine inches; the foot of a large cock turkey is four inches long, and its step twelve inches; but the *Ornithichnites giganteus* had a foot sixteen or seventeen inches long, and its step was from four to six feet! while *O. ingens*, which is remarkably distinct from the former, left a track not less than two feet long with a step of six feet! The step of the African Ostrich was not known, but the length of its foot is only ten inches. Prof. H. therefore conjectures that the heads of these birds must have been elevated from twelve to fifteen feet above the ground!

In conclusion, we would add that these discoveries are entirely new, no impressions of the kind, in any other part of the globe, having been known to Geologists. It has been remarked that there are fewer traces in the rocks of the existence of birds, than of any other class of animals; and this circumstance has been accounted for on the ground that they are less liable to be submerged, and of course less likely to be preserved in aqueous deposits. The rocks on which these birds left their tracks, are *older* than those in which reptiles occur in the greatest numbers.

COMMUNICATIONS.

LETTERS FROM A FATHER,

Living in the State of New York.

To his Son in Western Pennsylvania.

NO. X.

On the Culture of Corn.

To MY SON—Next to wheat, next as to its value and importance, and next as to the extent of its culture, is the corn crop. Corn always was, and always will be, one of the staple products of the country in which Providence has cast our lot. It has been cultivated in America from time immemorial,—by the aborigines, and by the pilgrims and their descendants, through every successive generation down to the present day. As an article of bread stuff, it has supplied, to the inhabitants of this continent, a greater amount of food than any other kind or species of grain. It is believed that the culture of corn may form an interesting subject for, at least, one of my letters.

Corn requires a rich, loose, and friable soil,unlike the soils most distinguished for wheat. Yet corn and wheat not unfrequently grow well on the same ground; but there are soils that are excellent for wheat, on which corn will not grow to any advantage. Stiff clayey soils are generally good for wheat, but they do not suit the corn crop, and on such soils it is never wise to attempt its culture. In general the best soils for corn are such as contain, in their composition, a large proportion of sand. It has been said, corn requires a rich soil—of course it should receive plentiful supplies of manure. It may be planted after almost any other crop. Wheat stubble, or an oat or rye stubble, is a good preparation for corn; but there is no better preparation for it than green sward. If the sward has become old and stiff, that is no objection to its fitness for the culture of corn.

As the practice of planting corn on green sward has become very general, and is considered an important improvement in husbandry, a few remarks relative to the manner of preparing the ground, will not be deemed inappropriate. A few days before the planting season arrives, the green sward, having had a plentiful supply of dung spread upon it, should be turned over, and the work performed in a masterly manner. I say, *masterly manner*, meaning to use the phrase emphatically. What I mean by it is, that the work should be performed in a very careful and skilful manner. Every particle of the sod should be broken up, and turned over in furrows dropping either flat down, or inclining a little one upon another. Frequently, while the plough is performing this work, it will be profitable to have a man follow, whose business it should be to rectify in places where the work is imperfectly performed. Such should be the tillage of green sward, when corn is to be planted upon it. But why speak of such tillage, as though it were applicable to corn ground alone? In no other manner should green sward ever be broken up, whatever may be the immediate use for which it is intended. If farmers, when they commence their summer fallows, would plough in the manner which has now been suggested,instead of cutting and covering, and leaving the clods in all positions, as many of them do, their gains would be very great. To the importance of ploughing well, I have already adverted several times in my preceding letters, and I wish to impress it upon your mind, that *good ploughing*, especially when applied to green sward,is an indispensable requisite of good husbandry.

Next after the ploughing, when green sward is turned over for a corn crop, should come the roller. It is by no means a matter of indifference whether the ground be or be not rotted. The roller is of great use to it in settling down the turf, and thus placing it in a situation the more readily to rot, and administer nutriment to the crop. The roller, as well as the harrow, should be drawn only in the direction of the furrows, not across them. But if you have no roller, or if the use of it is forbidden by the presence of too many stumps or stones, then the tillage must be completed, as well as it can be, by the use only of the harrow. It should be remarked, that rolling in such cases does not supercede the necessity of harrowing, but rather increases it. In every such case, the last implement to be employed in tilling the ground preparatory to planting, should be the harrow. The harrow should go over the ground, and continue to go, till the whole face of the inverted sward is completely broken and pulverized. Operators rarely, in such cases, use the harrow so much as it might be used to advantage. Let me remark here, that after green sward has been prepared for a corn crop in the manner above described, the ground should not subsequently during the season, be operated upon so deeply as to disturb the sods. Whether a cultivator or a plough be employed for subsequent tillage, its operations should be only very superficial.

Having taken a brief view of what needs to be done in order to prepare green sward, or any other ground, for planting, we come next to the planting itself. Here an important question arises—at what what distance apart should the hills of corn be planted? It is by no means a matter of indifference how corn is planted, in regard to distances. If the distances are too great, there is a needless waste in the use of the land—if too small, the corn will be choked, and rendered less productive than it otherwise might have been. The question as to distance has not been settled, so as to produce uniformity in practice. An opinion, however, prevails very generally among the best farmers in this section of the country, that corn should be planted considerably thicker than was formerly practiced. Few of our planters, I believe, now plant hills further apart thau three feet each way. Very different methods of planting are practiced. Some have rows only one way, and four feet apart, and on these rows plant the hills eighteen inches or two feet apart. Judge Buel, to whom the farmers of this state look for examples, plants his corn in hills three feet apart one way and two and a half the other. He rarely fails of obtaining large crops, frequently seventy-five bushels from an acre, and from that to one hundred. He plants, I believe, one of the larger varieties of corn, and when he plants, intends to have four stalks grow in a hill. Your manner of planting is evidentiy exceptionable, for the reason that you do not plant your corn thick enough. You will recollect that I noticed this, and spoke of it, when, in company with yourself, I saw your corn last fall. If you have rows two ways, crossing each other at right angles, they certainly need not be more than three and a half feet apart, in which case the hills will stand at that distance from each other. Or if you havs rows only one way, and four feet apart, you need not plant further apart on the rows than two feet. Try some experiments, and when you plant again use a measure.

Recently there has been made, in the manner of planting corn, a very important improvement, and I believe it has been generally adopted by planters. It is only to plant double, or more than double, the quantity of seed in each hill that is intended to have grow. The object of this is, to render it more sure, that after all the usual failures to which corn is liable, there will still be corn enough standing in the field, and enough in every hill. This is of great importance. It is strange that an improvement so simple, and so obviously of great utility, should not have been thought of long before. In connection with the first hoeing, all the shoots in each hill except four, are to be pulled out, and care should be taken to select the poorest for destruction, and retain the best. This will hinder a little the hoeing process, but the trifling hindrance will bear no proportion to the gains. I advise you to adopt this practice, and when you plant corn, drop at least eight seed kernels in each hill, instead of four. That you will be pleased with the result I have no doubt.

In what manner corn stalks can be disposed of to the best advantage, is a question which has of late been greatly agitated, and much has been written and published upon the subject. By numerous experiments, tried with accuracy at different times and in different places, it has been proved most satisfactorily, that topping corn stalks, at any time while they are green enough to be worth topping, always injures the corn. Its injurious effects are said to be found in the reduced weight of the grain, as well as in manifest damages to the quality of the greener part of it. The practice of topping stalks, therefore, is going out of use. Many practical farmers have discontinued it altogether, and my opinion is, that the practice should be entirely abolished.

Another method of saving corn stalks, far more economical than the other, and now coming into general use, is to cut the whole up near the ground, soon after the corn has become well glazed. It is then to be well secured in small stooks, until husking time, when the corn is to be taken care of, and the stalks put away for safe keeping. The results are, well matured corn, and large supplies of fodder. Sometimes, when corn is cultivated only on a very small scale, it may be better to harvest the crop early, and then cut up the stalks.

Corn should be planted earlier in the spring, than has generally been supposed to be advisable. Farmers in this section of the country have become well satisfied, that much is gained by early planting, and in general they plant earlier by several days than they did formerly. The tenth of May is not too early to plant corn, if the weather be suitable, and the ground in proper order. Any time after the twentieth of that month is too late, yet it may be better to plant late than never.

The numerous varieties of corn cultivated in this country, differ materially as to the length of time required to bring them to maturity. Some ripen earlier, and some not so early. The small sorts in general ripen earlier than the larger, and there is a difference among the larger varieties, some of them ripening earlier by several days than others. If a variety of corn that ripens early, and is in other respects suitable for field husbandry, is not now in your possession, you should seek for such a variety, and continue to seek until you obtain it. To cultivate such varieties of corn as come early to maturity, is a matter of far greater importance than most farmers seem to suppose. Many a time the contingency of having corn that ripens early will be the means of preventing great losses and sad disasters. It is understood, and doubtless is the fact, that any corn may be improved, as to its tendency to ripen early, by taking care every year to select for seed such ears as first come to maturity. This ought always to be done. Should this practice be commenced and persevered in, a variety of corn might soon be produced that would be in little danger from autumnal frosts.

A Father.

New York State, January, 1836.

Cultivation of the Chinese Mulberry:

Extracts from the letter of Joseph Davenport to William Kenrick, with Remarks.—No. 3.

BY W. W. B.

Mr. Davenport's reasons for preferring northern and eastern exposures for planting the Chinese Mulberry, to southern and western ones, were given in our last number. What is said in the following extract, in relation to open sandy soils, and other soils of loose texture, on their influencing, by their free admissisn of the air and greater warmth, the early and late vegetation of this tree, appears equally reasonable.

9. "The temperature of the soil, under any given latitude, varies with its composition, height and exposure. Consequently soil being of an open texture, admits the atmosphere so readily, that its temperature rises and falls almost with it, and of course is first to start in the spring, and last in the fall. Other soils, too, are more or less so, as they are kept light and open by manure and cultivation. Sandy soil being warmer at night, south and westerly exposures being last left by the sun, and having perhaps more wind in the night, are not quite so subject to the light autumnal frosts, as exposures from east to north; but the light early frosts do no harm, but on the other hand, rather prepare the trees for more severe ones. The safest place to plant this tree, so far as location is concerned, is on the high ground, where the wind circulates freely from all quarters, and brings with it the medium temperature of the season. Locations also contiguous to the sea, and on islands, are probably good, their temperature being regulated by the water."

The influence of large bodies of water in softening and equalizing the temperature of the surrounding atmosphere, is known to every observer. This produces an important effect upon vegetation. The warmth that arises from the water, communicated to the surrounding atmosphere, shields such plants and trees as are less hardy from severe cold. Accordingly the peach is found to grow well in such situations as on the banks of lakes, while in some places but a few miles distant, it is more or less killed by the winter. There can be no doubt that not only places contiguous to the sea, but the banks of our lakes, would be excellent locations for the cultivation of this tree.

10. "The next best is an easterly exposure, and the worst is on low ground near the foot of land descending to the south or south-west, surrounded by land which will seclude air and reflect heat. The best soil is a dry loam, as well to gravelly or stony, resting on a gravelly or open subsoil, that will freely let the surplus water pass off, and give no obstruction to the roots—of a medium quality—safer to be too poor than too rich, for I am confident that my land occupied by the Mulberry is in better condition than when first set with it. It would be as well if the land were cultivated one or two years without unfermented manure, unless it were quite low in condition before the trees were set on it. Sandy soil is next best, if not too loose and rich with manure. *Rich moist soil is wholly out of the question.*"

These directions in regard to the proper soil for the Chinese Mulberry are of importance. The great error into which we have fallen is the cultivation of this tree on soil that is too rich, too highly manured, by which its growth has been forced at the expense of its life. Experience has taught us a useful lesson. We shall know better how to treat it for the future. On ground that is naturally poor, a moderate manuring after one or two years' cultivation, when the trees have acquired strength and hardiness, may be beneficial.

11. "These remarks on soil and location are to guard against the worst, or such seasons as the last. Such seasons are rare. You will recollect that my trees endured all seasons till the last, and on highly manured gardens and low rich, moist and frostly soil, which are now pronounced wholly unfit; trimmed too of every twig in different seasons in the months of July, August and September. *Where the tree the last season was managed similarly to the method I am here endeavoring to describe, it succeeded full as well unprotected as the white by its side.* At any rate, of the 40,000 I now have, upwards of 20,000 were propagated by layers from trees that stood in the open field unprotected last winter."

If this be the fact, (and we have no reason to question the veracity of this gentleman,) there can not remain a doubt that the Chinese Mulberry may be cultivated with success wherever the White Mulberry will grow, and that is wherever we can raise Indian Corn. Every farmer who has a suitable soil and location, may raise a field of them with almost as much ease as he now raises a field of corn.

12. "But the last season, coming as it did now in the commencement, will no doubt be of great service to the future prosperity of the silk business; for *the tree had succeeded too well on soil wholly unfit for the production of good silk.* I must say it has been a valuable lesson to me, but a dear one."

A moist rich soil, producing a grosser, less nutricious foliage, is unfit for the production of good silk. Silk produced from leaves which grow on such soil is of inferior quality as to strength, fineness and luster. We are sorry this enterprising gentleman has sustained so severe a loss by the destruction of his trees the last severe winter. His private loss however will doubtless result in the public gain. "Bought wit," to use the common adage, "is the best wit if it is not bought too dear,"—and this will prove not too dear, if it results in a more correct knowledge and practice in the cultivation of this valuable tree, which will insure success in its cultivation, and produce a better quality of silk.

13. "Though the best soil and location is much to be preferred, I should, if this could not be had, use any dry, loamy, gravelly, or sandy soil, not too rich, and having a good subsoil, that came in my way, let the location be as it would. A soil too rich, I think, if of a right composition, may be planted to advantage by turning the rich surface quite low, where it would not be so readily effected by the atmosphere, and the first season move the surface but little, cut off the weeds above ground, if quite rich, and let the soil become hard. If the tree will endure the first and second season, it will by that time have taken deep root. The soil requires hardness that the growth be completed early in the season. Some of my three years old trees, that had been slightly cultivated this season, had nearly done growing a month ago,—(Mr. Davenport's letter bears date Sept. 21,)—the leaves are now quite yellow—many have fallen, and the trees are prepared for winter."

It is not every farm that possesses such a variety of soil and location as to admit of the most desirable choice. This defect however may be remedied in a considerable degree, provided there is a dry soil, such as would be suitable for corn, in the manner the writer suggests. The richer the soil, the less cultivation should be given it. Perhaps a single dressing of the ground at the forepart of the season, to destroy the weeds, would be all that would be necessary. It has been recommended to stir the ground about the trees only in the forepart of the season, that the surface may afterwards become hard by the action of the sun, which will prevent a too luxuriant growth, and help to ripen the wood.

W. W. B.

Smoke-Houses.

BY A LOVER OF GOOD BACON.

Mr. Tucker—Some four or five years since I built me a smoke-house, but I find it not exactly to answer the purpose anticipated, or realize my wishes respecting such a building; and if any of your correspondents, or yourself, would show wherein the difficulty consists, and the means of obviating it, a great favor would be conferred upon me, and undoubtedly upon others. My smoke house is built of brick about six feet square, of a suitable height, an arched, or rather pointed, roof of brick impervious to water, and a tightly fitted door. No vents were constructed in it at any height or situation. The foundation was firmly laid, by making a suitable excavation, filling it with small stones to the surface of the earth, and then placing large flagging stone for the brick to rest upon, two serving for the whole

foundation. So far all appeared fair, but when I came to use it, I found that the hams, instead of remaining dry, and acquiring that rich dark glossy hue which is so much admired in the Hamburg or Virginia hams, would keep wet and dripping, more resembling meat which had been dipped in pyroligneous acid, than smoke-house meat. As the house was built late in the season, I concluded the walls had not become perfectly dry, and to this cause I attributed the dampness of the hams. The next year, however, they remained the same, and then I charged the moisture on the want of proper ventilation. To obtain this, I bored holes through the top and bottom of the door, thus, by allowing the smoke to escape slowly, gradually changing the air enclosed; but no perceptible benefit resulted. To produce smoke, I used cobs from good sound corn, and of course dry, and not likely in themselves to produce such an effect on the hams. The result has constantly been the same, wet and dripping hams, and as a necessary consequence in my opinion, meat of bad flavor and inferior quality. What the cause may be I have not skill enough to divine, but a remedy described in the pages of the Farmer, would materially contribute to the comfort of a

LOVER OF GOOD BACON.

From the Spirit of Seventy-Six.

Making Butter.

MR. EDITOR—In your paper of the the 14th inst. I noticed Rev. W. Allen's method of making butter in the winter. I will tell mine. I have but one tin pan full at a milking. This is set on a furnace or stove and scalded—then carefully set away and not disturbed. In this way I get much more cream than in the common way. My churn is the old fashioned churn, and for the last eight cold weeks, I have made six pounds of butter per week. RUFUS WALKER.

Windsor, Feb. 18, 1836.

From the Silk Culturist.

Hedges.

We commend the following letter to the attention of cultivators of the Mulberry. The method of cultivating in hedges, we think the best that has been attempted, and have little doubt of its ultimately being universally adopted. The mulberry is cultivated in this manner in the form of fence and field hedges. On the borders of fields hedges may be set out for the double purpose of fence and foliage, and the anterior of fields is often covered with hedges, at suitable distances from each other to admit the passage of a hand cart or one horse wagon, for the purpose of gathering the foliage and transporting it to the cocoonery. The method of propagating is much the same in both cases, and is done either by transplanting the plants from the nursery, or sowing the seed where it is intended to make a hedge.

To make a hedge by transplanting from the nursery, take plants one or two years old, and set them at the distance of eighteen inches apart, or, if it be intended to make a thick set hedge, at the distance of one foot. Cut off the tops at four or six inches from the ground, leaving two buds opposite each other, and removing the rest. This causes the stock to have two vigorous branches the first year. The next spring, cut one of these two branches on the same side, at twelve inches from the ground, in such manner that each plant may have a long and a short one, but horizontally on the same side also one after another, all the branches, and fasten them with cords or withes, so that they may form a line parallel with the earth, and leave the entire branches untouched. At the commencement of the third year, the plants will have branches to form a hedge.

The height, form, &c. of a hedge may be regulated according to the taste or convenience of the cultivator, by cutting off the branches, when covered with leaves, and feeding the silk worm. Some cultivators are permitting standard trees to grow up out of their hedges at the distance of ten or twelve feet from each other. This is doubtless an improvement, as by cutting away the hedge, an orchard of standard trees would be left, should it ever be found desirable so to do. Rails might also be inserted into the standards, and a good fence easily made. To make a hedge from the seed it is only necessary to sow the seed and then treat the plants in the same manner as if transplanted from the nursery.

—

ALBANY, Jan. 4th, 1836.

F. G. COMSTOCK, ESQ.,—SIR—I have for the last four summers engaged in the culture of the mulberry. My object originally was, solely for the purpose of hedging; and I shall continue it, but if eventually my hedges can be turned to account, by the aid of the silk worm, I shall not hesitate in making them contribute to that object. I have already more than a mile in hedge and about two acres in nursery; and seedlings of last season, sufficient to add at least another acre to my nursery. In hedge and nursery, of two, three, and four years old, I have about 45,000. If I could procure a female of sufficient experience to take charge of the silk worms, I think I would make the experiment next summer; I think my trees would furnish food for 60 or 70 thousand worms, perhaps more. There is no one in this part of the country who has any practical knowledge of the management of the worm.

May I be permitted to ask, if you can refer me to any one, whom I could probably employ for that purpose.

Respectfully, your obedient serv't,

JNO. KEYES PAGE.

From the Cultivator.

Profitable Farming.

We give to-day another illustration of the productiveness of our pine lands, when under good management, in a communication from Samuel T. Vary. His improved lands have afforded him a nett profit of about thirteen dollars per acre, notwithstanding that his wheat and corn crops were seriously diminished by the grain and wire worms. If our farmers can all do as well as this in the old settled counties, we doubt whether they are likely to improve their condition by removing to Michigan or Illinois. We also invite the reader's attention to the interesting experiments of Mr. Miller and Messrs. Huntingtons.

—

Kinderhook, Dec. 18, 1835.

DEAR SIR—In compliance with your request, I send you the annexed statement of the products of my farm, and their sales for the year 1835. This is simply the account of the marketable products. I have reserved enough of the several kinds for the consumption of my family the ensuing season, which are not included in this statement. My farm consists of 173 acres, of which 145 are under cultivation; the remainder is in wood. The soil is sand and fine gravel, sand and loam, and sand clay. Portions are well adapted for grain, and again other portions for pasture and hay. I have not lived on the farm sufficiently long fully to understand and elicit its capacities, as for a number of years I have cultivated high and rocky land, where the farmer's principal profit was made from the products of the dairy. My oats were a full crop, so were my potatoes; but first the wire worm, or something else, and next the early frosts, lessened my corn crop, I think one half; and one of my pieces of wheat was somewhat injured by the grain worm. The cultivation of my farm was done almost exclusively by myself and sons. The expenses for my family and farm, that is, money paid out, is $383.75, and this amount must be deducted from the gross sum stated as the income for the year. I will not pretend that I have raised more from the same quantity of land, perhaps not as much as many of my neighbors; if I did, their evidences of thrift and good farming would not bear me out in any such pretension.

Products and Sales of the Farm for 1835.

12	Calves,	$37 80
196	lbs. Butter, at 20 cts,	39 20
1542	lbs. Cheese, at 8 cts.,	123 36
30	Lambs, at 15s.	56 25
850	bushels of Oats, at 52 cts	442 00
375	bushels Potatoes, at 2s.	93 75
20	tons of Hay, at $15 per ton,	300 00
75	bushels of Onions, at 4s.	36 00
500	bushels of Corn, at 6s. 9d.	421 88
220	bushels of Wheat, at 12s.	330 00
4	Cows Beef,	69 00
2	Oxen and 2 Steers,	130 00
7	Shoats,	17 00
1440	lbs. Pork, at 7 cts.	100 80
22	Wethers, at $4 each,	88 00
		$2,285 13
	Deduct money paid out,	383 75
		$1,901 38

I say nothing of the labor, as we have drawn our living from the farm.

I remain your friend, &c.

SAMUEL T. VARY.

Dr. J. P. BEEKMAN.

The Silk Business.

As Northampton stands at the head of places where the business of silk culture has been attempted, we have it in contemplation to enlarge our paper as soon as we can obtain a new printing press, and then open a new department expressly for agricultural matters and intelligence about silk business. This latter branch will be pursued here the ensuing season on a larger scale and with more practical intelligence, than in any other town in the country, and people are consequently looking to Northampton for correct information about it. A new impulse has been given to the raising of Cocoons and Mulberry trees and the Silk business generally, in this town, and that impulse has extended to nearly every state and territory in the Union. The plan of embarking in the silk business will not be urged with extravagant enthusiasm beyond what facts and fair reasonings will justify, but such statements will be given and arguments used, as will convince our agricultural friends there is no necessity for New England men emigrating to the West, for lack of lucrative employment at home. We fear the fruits of emigration rarely come up to the extravagance of expectation, and we want to retain among us the vigor and moral strength and energetic young men of New England. In aid of our new efforts, we shall be assisted by various intelligent and energetic farmers and practical gentlemen here, among others, Mr. William Clark, Dr. Stebbins, and Mr. Whitmarsh, now on a tour in France and Italy for the express purpose of acquiring an intimate practical knowledge of every department of the silk business.—*Northampton Cour.*

Sir John Sinclair, Bart. died at Edinburgh, in the latter part of December, aged 82 years. He was a member of the Privy Council of Great Britain, and had written upwards of 100 volumes on Agriculture, Finances, the Influence of Climate, &c. It may be truly said, that no man of the present age has done more good to the world than has this eminent individual. His principles of husbandry will live throughout all time, and entitle him to the appellation of being a benefactor of mankind. How sweetly the mind treasures the recollection of one whose reputation, like that of Sir John Sinclair's, has been earned by deeds of virtue—whose genius and talents were exerted in successful efforts to improve the condition of his species—to add to their moral and physical comforts, and to elevate the character of the tillers of the earth.—*Far. & Gar.*

Plaster is composed, in 100 parts, of lime 33.0 sulphuric acid 44.8, and water 21.2

Choosing Sheep for Breeding.

One of the two species of sheep, the long and the short wooled, having been chosen as most appropriate to the situation, and wool being made an object, it is most advantages to select such flocks as are pure as possible of the species to which they belong, and not a mixture of the short and long wooled breeds, which must generally produce an inferior fleece, disadvantageous to the manufacturer. Length of staple in the long, and fineness, elasticity and closeness in the short wooled fleece, will be the best guides in this case.

Whether the wool be long or short, the carcass of the animal ought to be amply and regularly covered; it is a great defect when the belly is bare, and a still greater when the wool is thin and open along the ridge of the back, admitting rain and moisture to a most susceptible part, indeed to descend upon all parts of the body.

It is a piece of good old advice, to buy your *rams* a little before shearing time, if possible; and a very necessary modern addition to take the opportunity of purchasing at the farmer's house, while you see the animal in *puris naturalibus*, and before he has been decked out and trimmed for show by the sheep barber. A thick fleece, covering all parts with as much equality as possible, containing plenty of *yolk*, or retained or inspissated perspiration, is the object. If ewes, equally well bred, can be procured, the shepherd anticipates and reaps an immediate benefit; if not, he must patiently await improvement of his wool, through the medium of the superior blood of his rams.

At *shearing time*, examine the bottoms of the fleece, or the lower extremity of the filaments of wool; if it be *stichey-haired*, of mixed quality, or if the sheep have a coarse breech, or be not well covered, it must be rejected, as improper for a breeding stock, where it would perpetuate its defects. The quantity of yolk or grease is a good proof of the thickness of the fleece, since by the closeness and thickness of the wool, the grease or perspirable matter of the animal is retained; hence fine, curled, curled wool has ever the greatest quantity of yolk.—*Bath Memoirs.*

Notes on Farming.

From the Memorandum Book of Judge Buel.

Roots.—The Roots of many plants will creep aside to avoid bad earth, or to approach good.—*Buffon.* Darwin says, roots put out no absorbent vessels where they are not stimulated by proper juices; and that they elongate only where they find proper nutriment.—*Phy.* 17. Where the soil is rich and mellow, the roots of most plants are longer than the stems. Mr. Thurell traced the fibers of the roots of wheat five feet deep, on the side of a marl pit; also the root of a turnep, drawn by hand, two feet and a half in length. The importance of extended roots and of tilling the ground, to the vigor and productiveness of a plant, may be evidenced in our tillage fields, where the outside rows, or outer border of grain, is generally inferior, because the roots cannot so freely extend into the adjoining grass grounds, and because the ground is often less perfectly tilled. Cobbet has given a forcible illustration in this matter: several rows of turneps were drilled one foot apart, along side of a ridge, which was ploughed and harrowed, when the turneps ought to have been hoed, but which were not hoed at all. The third row of turneps from the fresh ploughed ridge were double the size of the rows beyond it; and those in the first row were larger than those in the second. This difference was imputed wholly to the influence of the fresh ploughed adjoining ridge; and this influence extended to the third row, so as to double its product, and consequently the roots of the turneps growing in the third row must have extended three feet to have reached the ploughed ground. These facts admonish the farmer to plough *well*, and to use the cultivator freely among his hoed crops.

Norfolk course.—Norfolk is a sandy district, and until the introduction of the turnep culture, was one of the least productive counties in England. That culture, and the improvements consequent upon its introduction, have rendered it one of the most productive. The course of crops is, 1. Turneps always with manure; 2. Barley or oats and grass seeds; 3. Grass two years; 4. Wheat or rye. Mr. Young thinks but *one* ploughing should be given to a two year's lay, in the fall, for winter grain, and but one in the spring for (with us) corn or potatoes.—*See Young's Norfolk, p.* 62. The only variation which modern improvement has made in the Norfolk course, is to sow, in some cases, peas on the sod, and follow with wheat in autumn. The rotation is a judicious one on our sandy lands, where turneps are sufficiently cultivated; but as this culture is too limited in all cases, Indian corn may be advantageously substituted, or superadded, with manure, as the first crop in the course. Peas, as a fallow crop, to be followed by wheat, upon a two years' lay, is preferable to a naked fallow.

Norfolk maxim.—Never take two crops of white corn, (i. e. small grains, as wheat, rye, barley, oats, &c.) in succession.—*See as before, p.* 364. Mr. Young thinks the pre-eminence of Norfolk husbandry is principally owing to a strict adherence of this maxim. This maxim should be amended so as to read, "never take two crops of *any kind* in succession," and the result will be found correspondingly beneficial.

Marl is applied in Norfolk at the rate of from 8 to 100 loads per acre; if the less quantity, it is often repeated. Seventy loads per acre will last fifteen or sixteen years. This is said on the authority of Young.

Planting.—We have said that the forests of England have all been planted by the hand of man. To give an idea of the extent of these plantations, we state, that in twenty years, Mr. Coke planted 718 acres to forest trees of various kinds, with 2,123,000 plants. Mr. Bevan planted 96,000 trees.

List of Payments

For the Farmer from Feb. 26, *to March* 4, 1836.

For vol. 6.
Charles D. Palmer.
Tristram Allen.
Ebenezer Whittimore.
Sam'l Satterthwaite.
I. Gibbons.
John Aldrich.
Elijah Shaw.
John Christopher.
A. B. Eaton.
Nathan J. Stiles.
John C. Munroe.
Lucian Rowe.
S. Rycnail.
John Jessup.
Richard Day.
Joseph Norman.
Joseph Fellows.
Wm. Culver.
E. T. Aldrich.
A. Pratt.
Pierce Butler.
Geo. Shoemaker.
Charles Dorrance.
John Burnett.

For vol. 5.
H. H. Bogert.
James Hutchinson.
Allah M'Math.

First half of vol. 6.
Wheeler Truesdell.
Wm. Shattuck.
James Hart.
Cleavland Ellis.
Hiram Mathews.

A. Stone, for vol. 5 and ½ of 6.
Truman Hart, for vols. 5 and 6.
J. Kincaid Buchanan, for vols. 6, 7, and ½ of 8.
Robert Swartwout, for vols. 3, 4, 5 and 6.
Wm. Mitchell, from July, 1835, to July, 1836.

WILLIAM ATKINSON,
REAL ESTATE BROKER,
17, *Exchange-street, Rochester.*

BUYS and sells Farms and City Property on commission, and attends to the collection of Mortgages.

☞ Several valuable Farms for sale.
February, 1836. feb 20f6m*

1000,000 Silk Worm Eggs,
FOR SALE.

THE subscriber having promised to supply so many individuals who called to see his worms at work last year, and he having already sold so many, deems it proper to advise those who have not yet received any, and are intending to have some, that they must order them at once, or possibly they will be disappointed, the demand being so great, and this being the proper season to forward them. They are sold for 25 cents a thousand. Orders enclosing the amount will be punctually attended to.
JAMES HOUGHTON.
Rochester, Jan. 7, 1836. j7rf3m

Trees. Seeds, &c.

100 LBS. White Mulberry Seed, direct from the most celebrated silk districts in Italy.
75 lbs. White Mulberry Seed of American growth.
60,000 Chinese Mulberry Cuttings, perfectly prepared for planting.
2,500 Chinese Mulberries of large size, 900 of which are inoculated on the White Mulberry, which gives them additional hardihood. Price $50 per 100. These trees were planted in an orchard, which it is necessary now to remove.
35,000 Chinese Mulberries, of the usual sizes, at $25 to $30 per 100, and some of larger sizes at $37 per 100.
Fruits and Ornamental Trees, Green-House Plants, Roses, Bulbous Roots, &c.. the collection of which is unrivaled, and priced catalogues of which will be sent to every applicant.
Double Dahlias, above 500 of the most splendid varieties, and comprising 200 very rare and superior kinds not to be found elsewhere in the Union.
Garden, Agricultural and Flower Seeds, an immense collection, comprising all the new and rare varieties of vegetables, &c., as will be seen by the Catalogue.
20 bushels of the celebrated Chevalier Barley.
1000 lbs. Early Crimson Clover, or Trifolium incarnatum.
2000 lbs. White Dutch Clover.
20 bushels Talaunæ Wheat.
10 " Venetian do.
100 " Early Angus or Hopetown Oats, the latter weighing 44 lbs. per bushel.
160 bushels Orchard Grass.
75 " Tall Meadow Oats Grass.
30 " Italian Rye Grass, (*very valuable.*)
100 " Pacey's Perennial Rye Grass.
2000 lbs. Finest Provence Lucerne.
20 bushels New White Field Beans, *very productive.*
300 " Early Nonpariel, Lancashire Pink Eye, Taylor's Forty Fold, and other celebrated Potatoes.
25 bushels Potatoe Onions.
Also—Field Burnet, St. Foin or Esparcette, Large Riga Flax, Lentiles, Vetches Millet, Yellow Clover, a superior large variety of Teazel, two new varieties of Caster Oil Bean, Weld, Wond, Madder, &c.
Orders sent direct per mail will receive immediate attention, and Seeds in quantity will be supplied at very moderate rates. WM. PRINCE & SONS,
Linnæan Botanical Garden and Nurseries,
mar 5-f2t *Flushing, near New York.*

Robbins' Planting Machine.

WITH this Machine Corn, Beans, Peas, Broom Corn, Mangel Wurtzel, Turneps, Onions, and seeds of almost every description, can be planted with more system and correctness than can be done in the usual manner of planting with the hand and hoe. One man may easily plant five acres a day, placing the seeds any given distance apart, from two or more inches, and in rows two and a half feet apart.

Machines can be had by applying to REYNOLDS & BATEHAM, Rochester; C. N. BEMENT, Treasurer of the State Agricultural Society, Albany; BUSHROD BUCK, Lanesborough, Berkshire county, Mass.; and DANIEL T. BUCK, Lowville, Lewis county, agent and proprietor for making and vending said machines, at all of which places it is intended to keep a supply on hand
Lowville, Nov. 24, 1835. nov 28-6m

Monroe Horticultural Garden & NURSERY.

THE subscriber offers to the public a choice selection of Fruit Trees, of French, German, English and American varieties, consisting of Apples, Pears, Plums, Peaches, Cherries, Apricots, Nectarines, Quinces, Currants, Gooseberries, Raspberries, Strawberries, Ornamental Trees, Shrubs, Plants, Hardy Roses, Vines, Creepers, Herbaceous Perennial Plants, Bulbous Roots &c. &c.

ALSO—A few hundred of the Morus Multicaulis, or Chinese Mulberry, the White Italian Mulberry by the hunbred or thousand, Grape Vines of both native and foreign varieties, mosty of large size, for sale by the single vine, hundred or thousand, at reduced prices. The subscriber has a large collection of Green-House Plants of choice and select varieties, and in good condition.

Catalogues will be sent to those who wish them, gratis, or may be had by calling at the office of the Genesee Farmer. ASA ROWE.

CATALOGUE
OF
GARDEN AND FIELD SEEDS,
FOR SALE AT
THE ROCHESTER SEED STORE,
No. 5, Arcade Avenue, two doors from the Post Office.
BY REYNOLDS & BATEHAM.

Esculent Vegetables.

ARTICHOKE.
Green Globe.

ASPARAGUS.
Battersea.
Large German or Giant.

BEANS. *English Dwarfs.*
Broad Windsor,
Green Windsor,
Early Mazagan,
Early Long Pod,
Horse

Kidney Dwarfs.
Early China Dwarf, or Red Eye,
Early Quaker,
Early White Cluster,
Early Black,
Early Yellow Six Weeks,
Early Yellow Rob Roy,
Large White Kidney Dwarf,
Tampico Black,
Refugee, or Thousand to One,
Marrow or Warrington,
Dwarf Sabre or Cutlass.
Dwarf White Cranberry,
Dwarf Red do
Bonavista, *new, very rich,*
White Field, *of sorts.*

Pole or Running.
Early White Flageolet,
White Dutch Case Knife,
Red Cranberry,
White Cranberry,
French White Prolific,
French Straw Colored, *new*
Soissons, (*new*)
London Horticultural, (*fine.*)
Large White Lima,
Prolific Lima, *new, productive and excellent.*
Large Scarlet Runners,
Large White Dutch Runners,
Queen's, Beautiful, (*new.*)
Asparagus or Yard Long.

BEET.
Early Blood Turnep Rooted,
Early Red Scarcity,
Early White Scarcity, or sugar *very sweet,*
Long Blood Red,
Large Long Red,
Yellow Turnep Rooted,
Mangel Wurzel, *for field culture.*
Sir John Sinclair's,
French Sugar, or Amber Beet.

BORECOLE, or KAIL.
Tall Green Scotch Curled,
Red, Brown, or Purple Curled,

BRUSSELS SPROUTS.

BROCCOLI.
Early Large Purple Cape,
White Cape, or Cauliflower,
Grange's Early Cape, or Cauliflower,
Brimstone, Portsmouth, or Sulphur, *cream colored and very large,*

CAULIFLOWER.
Fine Early,
Late English,
London particular, *fine,*
Late Dutch, *hardy.*

CABBAGE.
Early May,
Early French,
Early York, *true, fine,*
M'Ewan's Early, *produces second crop after cutting.*
Early Sugarloaf,
Large Early York,
London Battersea,
Dwarf Drumhead, or Flat,
Flat, or Low Dutch, (*late Dutch*)
Late German, or Strasburgh, the largest, *for cattle,*

CABBAGE.
Large late Drumhead,
Large late Flat Battersea,
Red Headed Dutch, or Red Globe, *for pickling,*
Green Curled Savoy,
Yellow, or Golden Savoy,
Large Pancalier Savoy, *new and superior,*
Large Cape Savoy,
Purple Turnep-rooted above ground, *Arabian, Kohl Rabi, or Egyptian Kale,*
White Turnep-rooted, under ground.

CARROT.
Early Yellow Horn,
Long Orange,
Long Red Studley,
Altringham, *long scarlet, fine,*
Lemon, or Pale Yellow,
Blood Red,
Mammoth or Large Field.

CARDOON.
French, Large Solid, or Tours.

CELERY.
White Solid,
Rose Colored Solid,
New Silver Giant,
North's Giant Red,
Celeriac, or Turnep-rooted.

CHERVIL, Curled.

CORN SALAD, *Fetticus or Fettikost.*
Broad Leaved,
Italian, or Late Regent, *new.*

CRESS.
Curled, or Peppergrass,
Broad-leaved Garden,
Water, or Winter.

CUCUMBER.
Early Short Green,
Early Green Cluster,
Early White Dutch,
Early White Russian, *for pickles, &c., new,*
Long Frame,
Long Green,
Extra Long Green,
Long Green Southgate, *very fine,*
Long Green Prickley,
Long Green Turkey.
Long White do
White Spined,
Small Green, *for pickles.*
Small Gherkin, or W. India, *for pickles.*
Serpent, *curious.*

EGG PLANT.
Purple, (*best for culinary use,*)
White, (*ornamental.*)

ENDIVE, or SUCCORY.
Green Curled,
White Curled,
Broad-leaved Batavian.

GARLIC.

INDIAN CORN.
Early Golden Sionx,
Early Tuscarora, *fine for boiling,*
Cobbett's Early Normandy, *new,*
Sweet or Sugar, *best for boiling,*
Pearl, or Pop, *for parching,*
Mottled Pearl, *in great variety,*
Large Mottled, do
Field Corn, *of the choicest varieties.*

KALE, or KAIL.
Scotch Green Curled, *&c., see Borecole,*
Cæsarian, or Cow Cabbage, *for cattle.*
Sea Kail.

LEEK.
Large Scotch,
Musselburgh or Flag,
London, Broad Leaved.

LETTUCE.
Early Dwarf Head,
Large Early White French,
Early Silesia, Batavian, *or early Ice, very curled and tender.*
Wilson's Early Cabbage,
Royal Cabbage, Union, or Imperial,
Large Green Head, *green cabbage, Hardy green, or Hammersmith,*
Imperial Cabbage, or Large German,
Brown Dutch, *hardy for winter,*
Green Ice Head,
Tennis Ball, Rose, or apple, Drumhead, or Malta,
Turkish, *or Black seed Imperial, very large.*
Early Green, or Egyptian Coss, *hardy,*
Florence, Golden, Malta, or Ice Coss, *early superior,*
Green Curled Ice Coss,
White, or Brighton Coss, or Loaf, *early and hardy.*
Thorburn's Ice Coss.

MELON.
Green Citron, *green fleshed.*
Pineapple, do
Persian, do
Nutmeg, do
Bingham's Green Fleshed,
Small oval Romana, *perfumed,*
Large Yellow Canteleupe,
Round Pomegranate, or sweet scented,
Minorca, or netted Canteleupe,
Skilman's fine netted,
French Muscade,
Starr, *very late,*
Egg, *beautiful,*
Long Island Water, *fine,*
Carolina Water,
Citron Water, *for preserves,*
Snake, *curious.*

MUSTARD.
White, or English,
Black or Common.

NASTURTIUM.

OKRA.
Common Green,
Long White.

ONION.
White Portugal, or Spanish,
Large Red,
Yellow Dutch, or Straw Colored, *very large, excellent, keeps well,*
Large White, or Silver Skinned,
Madeira, *genuine imported.*
Potatoe Sets.

PARSLEY.
Plain, or Single,
Curled, or Double,
Dwarf Curled, or extra curled, *very double.*

PARSNEP.
Large Long Dutch,
Long Guernsey.

PEAS.
Early Paris six weeks, *new,* 2 feet in height,
Early Washington, or May, 2 1-2 feet,
Early Charlton, *or Golden Hotspur,* 3 feet,
Early Frame, 2 1-2 feet,
Early double blossom Frame, 3 feet,

PEAS.
Early Nimble Dick, 2 1-2 feet,
Early June, 3 feet,
Bishop's early dwarf Prolific, *true,* 1 foot,
Knight's tall Marrow, or Honey, 6 feet, *superior,*
Knight's dwarf-marrow, 3 feet,
Dwarf white marrow-fat, 3 1-2 feet.
Tall white marrow-fat, 6 feet,
Dwarf Prolific, Strawberry, or Poor Man's, 1 1-2 feet,
Dwarf Spanish, or *fan,* 1 foot,
Dwarf blue Imperial, or *Scimetar,* 3 to 4 feet,
Dwarf blue Prussian, 2 1-2 feet,
Tall Sugar, *crooked edible pods,* 6 feet,
Dwarf Sugar, *edible pods,* 2 1-2 feet,
Tall Brown Sugar, *large,*
New Green marrow,
Large Green,
Large Gray,
White field, *from Canada, fine,*

PEPPER.
Bell or Oxheart,
Tomato shaped, or Squash,
Large long Cayenne,
Sweet Spanish,
Yellow,
Monstrous French.

PUMPKIN.
Large Cheese,
Mammoth,
Spanish Cheese, *very solid and superior, new,*
Fine yellow, *field,*

RADISH.
Earliest French scarlet,
Mason's early scarlet short top, *finest,*
Early frame or long scarlet,
Long Salmon,
Naples, or Long white transparent,
Long white, purple top,
Long Purple,
Long Crooked,
Early Cherry, or Scarlet turnep,
Early white turnep,
Yellow turnep, *for summer and autumn,*
White Spanish, or White fall,
Black Spanish, *for fall and winter.*

RHUBARB, or Pie Plant.

SALSIFY, or vegetable oyster.

SORREL.

SPINAGE.
Round, or Summer,
Prickly, or Winter,
Holland, or Lamb's Quarter, *for summer,*
Flander's Large Leaved, *finest for winter, and suitable for all seasons,*
New Zealand, or *Tetragonia expansa,*
English patience dock.

SQUASH.
Summer bush, *or scollop,*
Summer crookneck, *running,*
Winter or fall do.,
French Solid, *new,*
Large Yellow Bell,
Cocoa-nut, or Porter's,
Acorn, or California,
Vegetable marrow,
White Canada,
Italian, *new,*

SQUASH
Nutmeg, *fine.*

TOMATO, or Love Apple,
Large red,
Mammoth do. *extra large,*
Small Round,
Yellow,
Pear shaped.

TURNEP.
Early White Flat Dutch.
Early Yellow Dutch.
Early White Garden Stone.
White Flat or Globe.
Red Round or Red Top.
Large English Norfolk, (*for field.*)
Long Tankard or Hanover,
Yellow Stone, Six Weeks or Orange.
Red six weeks or Red Stone.
Yellow Maltese.
Yellow Sweedish, Russian or Ruta Baga.
White Swedish, *or French.*
Yellow Altringham.
Dale's new Yellow Hybrid.
French Long Yellow.
Freneuse Winter, *par excellence.*

Field Seeds.

Barley.
Beans, white field.
Broom-corn.
Buckwheat.
Carrot, large field.
Clover, White Dutch.
Red.
Trefoil or Yellow.
Crimson Trefoil *or* Trifolium incarnatum, *new, annual.*
Flax.
Grass, English Ray or Rye.
Pacey's perennial Rye grass.
Italian perennial Rye Grass.
Orchard or cocksfoot.
Timothy or spear.
Red Top or Herds.
Tall Meadow oats grass.
English turf or lawn.
Gama.
Hemp.
Indian Corn, *choice varieties.*
Lucerne.
Madder, *dyer's.*
Mangel Wurzel.
Millet.
Mulberry, fine white Italian, *for silk worms.*
Mustard, White or English, *medicinal.*
Black or Common.
Oats, English Potatoe.
Early Angus, *new and superior.*
Hopeton, *new and superior.*
Skinless, *new and rare.*
Peas, *many varieties.*
Tobacco, Virginian.
Golden Leaf.
Turnep, Ruta-Baga, *and many other varieties.*
Vetches, or Tares, Winter, and Spring.
Yellow Locust, *finest Long Island variety.*
Honey Locust, *for hedges and ornament.*

Bird Seeds.

Canary—Rape—Hemp—Millet—Yellow.